

Hands On Tutorial with MongoDB



mongoDB



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Content

1. Database Structure

1.1. Referenced vs Embedded

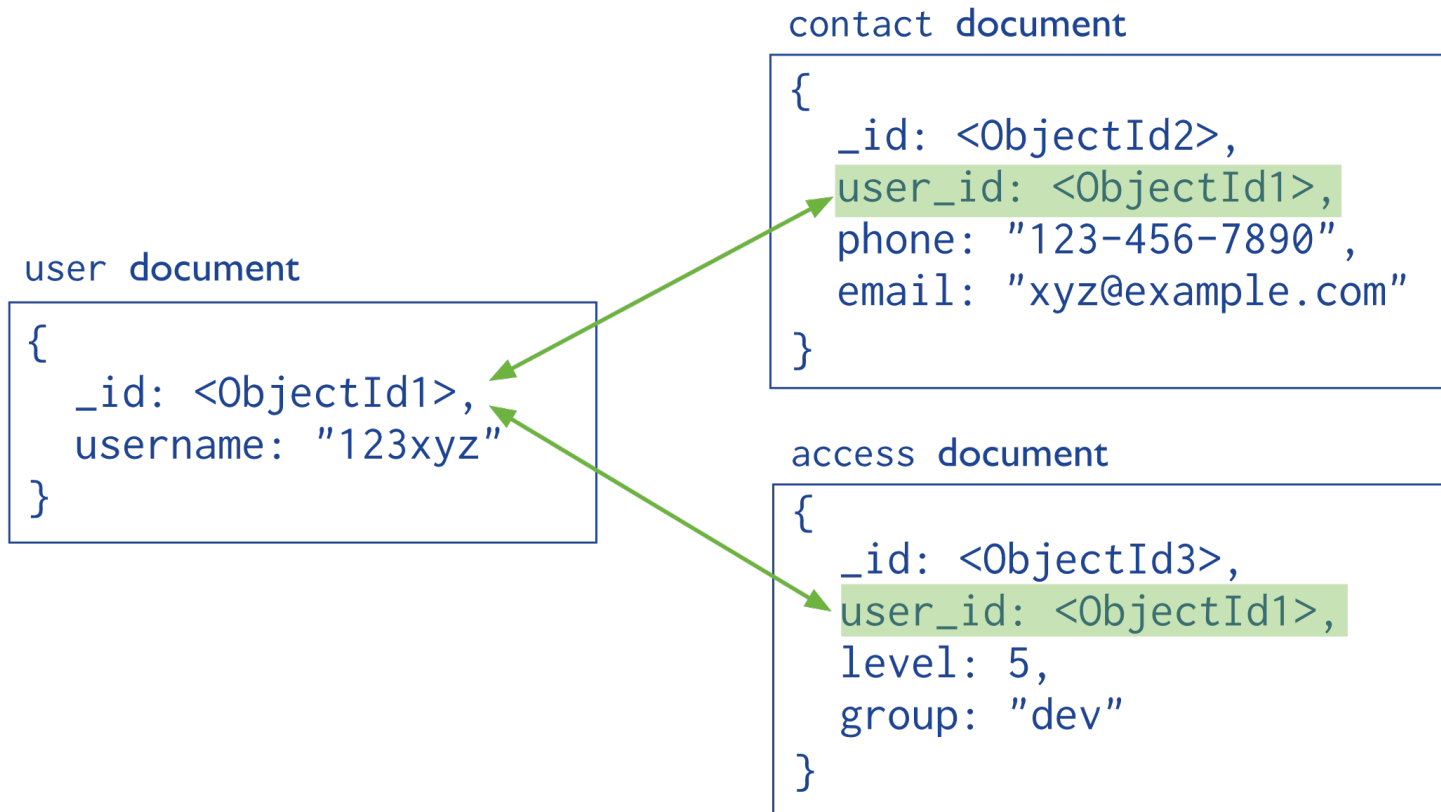
2. CRUD Operations

3. Helpful Resources

1. Database Structure

1.1 Referenced vs Embedded

Referenced - Normalized



Similar to *RDBMS Schema* (*Source: Data Model Design for MongoDB Release 2.4.8 page 7*)

1. Database Structure

1.1 Referenced vs Embedded

Embedded - Denormalized

```
{
  _id: <ObjectId>,
  username: "123xyz",
  contact: {
    phone: "123-456-7890",
    email: "xyz@example.com"
  },
  access: {
    level: 5,
    group: "dev"
  }
}
```

Embedded sub-document

Embedded sub-document

2. CRUD Operations

with sample database for Business Cards

Embedded Schema:

contact
<div>name</div> <div>company</div> <div>address<ul style="list-style-type: none">→ street→ city→ state→ zip</div> <div>title</div> <div>phone</div>

2. CRUD Operations

Starting MongoDB - Connect to the Database Server

Syntax:

```
$ mongo  
> show dbs           // Viewing DBs  
> use db_name        // Creating DB  
> show collections   // Show Collections
```

Example:

```
> use b_cards
```

2. CRUD Operations

Create – insert() | save() | update()

Syntax:

```
> db.collection.insert()  
> db.collection.update()  
> db.collection.save()
```

Example:

```
> db.contact.insert({ name: "Obi-Wan Kenobi" })  
  
> db.contact.insert({ name: "Carl Sagan", title: "Board of  
Trustees, SETI Institute", address: { street: "189  
Bernardo Ave, Suite 100", city: "Mountain View", state:  
"CA", zip_code: "94043"}, phone: "650-961-6633" })
```

2. CRUD Operations

Read – find() | findOne()

Syntax:

- > db.collection.find()
- > db.collection_name.find({"param0" : , "param1" })
- > db.collection.findOne()

Example:

- > db.contact.find({ name: "Carl Sagan" }).limit(5)
- > db.contact.findOne({ name: "Obi-Wan Kenobi" })
- > db.contact.find()

2. CRUD Operations

Update – update() | save()

Syntax:

- > db.collection.save()
- > db.collection.update(criteria, objNew, upsert, multi)

Example:

```
> db.contact.save({ _id : ObjectId("~078bfd0bcf4047"),  
name: "Obi-Wan Kenobi", title: "Jedi Master, Jedi  
Council", })
```

2. CRUD Operations

Delete – remove() | drop()

Syntax:

```
> db.collection.remove()  
> db.dropDatabase();
```

Example:

```
> db.contact.remove( { name : "Obi-Wan Kenobi" })  
> use contact;  
> db.dropDatabase();
```

3. Helpful Resources

Help:

- > help
- > db.help()
- > db.collection_name.help()

Web Based UI:

MongoDB Web UI - <http://rockmongo.com/>

Interactive TryOut Shell - <http://try.mongodb.org/>

Trainings(Free):

MongoDB University -

<https://education.mongodb.com/>

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Thank You!

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